

Permit Fact Sheet

General Information

Permit Number:	WI-0058718-06-0
Permittee Name:	WRR Environmental Services Co Inc
Address:	5200 Ryder Rd
City/State/Zip:	Eau Claire WI 54701
Receiving Water:	Groundwaters of the Lowes and Rock Creek Watershed of the Lower Chippewa River Basin in Eau Claire County

Facility Description

WRR Environmental Services recycles industrial solvents, blends a fuel for cement kilns, provides emergency response and household hazardous waste collection. Operation occurs usually 24 hours/day, 5 days/week, 12 months/year. The current permit regulates the discharge of approximately 37,000 gallons per day (gpd) of combined waste streams of groundwater remediation stormwater runoff from the waste storage area, various boiler wastewaters, water softener flushing and cooling tower blow-down. This wastewater is collected in a sump near the SW corner of the plant and pumped to the adjacent, open (360,000 gallon) reservoir. Overflow from the reservoir is piped to an open ditch along the southern boundary of the plant which then flows to an absorption area. Contaminated ground water is currently being remediated by air sparging.

The combined waste streams currently discharged to the 360,000 gallon storm water collection tank (reservoir) located in the SW corner of the plant are as follows:

- a) Collection of storm water runoff (approx. 12,300 gpd, precipitation dependent)
- b) Groundwater extraction. (approx. 4,400 gpd). There are recovery wells located on and adjacent to the site for pumping/extraction of groundwater from a perched groundwater system below the site. Groundwater is contaminated with low levels of organics, namely: acetone (2-propanone) and methyl ethyl ketone (MEK, 2-butanone). This water is steam-stripped 'turbostripped' prior to discharge to the large reservoir and then the absorption field.
- c) Boiler blow-down from operating boilers on site (approx. 12 gpd).
- d) Water softener flush (approx. 150 gpd).
- e) Cooling tower blow-down (approx. 5,700 gpd)

It's important to note that these ratios of wastewater sources have changed from the numbers which were documented in the 2017 fact sheet. For reference, those numbers are included as follows:

- a) Collection of storm water runoff (approx. 2,300 gpd, precipitation dependent)
- b) Groundwater extraction. (approx. 14,000 gpd).
- c) Boiler blow-down from operating boilers on site (approx. 900 gpd).
- d) Water softener flush (approx. 300 gpd).
- e) Cooling tower blow-down (approx. 7,200 gpd)

Substantial Compliance Determination

Enforcement During Last Permit: The permittee received a Notice of Noncompliance (NON) on 01/05/2023 due to not calibrating the flow meters on an annual basis. The permittee has taken steps to ensuring that all flow meters are calibrated at least annually.

After a desk top review of all discharge monitoring reports and a site visit on 12/14/2022, this facility has been found to be in substantial compliance with their current permit.

1 Land Treatment – Proposed Monitoring and Limitations

1.1 Sampling Point(s)

Sample Point Designation		
Sample Point Number	Discharge Flow, Units, and Averaging Period	Sample Point Location, WasteType/sample Contents and Treatment Description (as applicable)
002		Representative samples shall be collected prior to discharge to the absorption pond. Discharge is limited to cooling water bleed-off, boiler blowdown, water softener flush, groundwater extraction, and stormwater.

1.2 Sample Point Number: 002- DISCHARGE TO ABSORPTION POND

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Flow Rate		MGD	Daily	Total Daily	
1,1-Dichloro- ethane	Monthly Avg	467.5 ug/L	Quarterly	Grab	
1,2-Dichloro- ethane	Monthly Avg	2.75 ug/L	Quarterly	Grab	
1,1-Dichloro-ethylene	Monthly Avg	3.85 ug/L	Quarterly	Grab	
1,2-cis Dichloroethene	Monthly Avg	38.5 ug/L	Quarterly	Grab	
1,2-trans Dichloroethylene	Monthly Avg	60 ug/L	Quarterly	Grab	
1,2-Dichloro-benzene	Monthly Avg	330 ug/L	Quarterly	Grab	
1,3-Dichloro-benzene	Monthly Avg	360 ug/L	Quarterly	Grab	
1,4-Dichloro-benzene	Monthly Avg	45 ug/L	Quarterly	Grab	
Carbon tetrachloride	Monthly Avg	2.75 ug/L	Quarterly	Grab	
Chloroethane	Monthly Avg	240 ug/L	Quarterly	Grab	

Monitoring Requirements and Limitations					
Parameter	Limit Type	Limit and Units	Sample Frequency	Sample Type	Notes
Chloroform	Monthly Avg	3.3 ug/L	Quarterly	Grab	
Chloromethane	Monthly Avg	16.5 ug/L	2/Month	Grab	
Methylene chloride	Monthly Avg	2.75 ug/L	2/Month	Grab	
1,1,1,2-Tetrachloro-ethane	Monthly Avg	38.5 ug/L	Quarterly	Grab	
1,1,2,2-Tetrachloro-ethane	Monthly Avg	0.11 ug/L	Quarterly	Grab	
Tetrachloroethylene	Monthly Avg	2.75 ug/L	Quarterly	Grab	
1,1,1-Trichloro-ethane	Monthly Avg	120 ug/L	Quarterly	Grab	
1,1,2-Trichloro-ethane	Monthly Avg	2.75 ug/L	Quarterly	Grab	
Trichloro- ethylene	Monthly Avg	2.75 ug/L	Quarterly	Grab	
1,2,4-Trichloro-benzene	Monthly Avg	42 ug/L	Quarterly	Grab	
Methyl ethyl ketone (MEK)	Monthly Avg	800 ug/L	2/Month	Grab	
Methyl isobutyl ketone (MIBK)	Monthly Avg	275 ug/L	2/Month	Grab	
Acetone	Monthly Avg	1.8 mg/L	2/Month	Grab	
Vinyl chloride	Monthly Avg	0.11 ug/L	Quarterly	Grab	
Benzene	Monthly Avg	2.75 ug/L	Quarterly	Grab	
Toluene	Monthly Avg	480 ug/L	Quarterly	Grab	
Xylene	Monthly Avg	1.5 mg/L	Quarterly	Grab	
Ethylbenzene	Monthly Avg	420 ug/L	Quarterly	Grab	
Trimethylbenzenes	Monthly Avg	288 ug/L	Quarterly	Grab	
Methyl tert-butyl ether (MTBE)	Monthly Avg	36 ug/L	Quarterly	Grab	
PFAS		ng/L	Quarterly	Grab	Per-and Polyfluoroalkyl Substances found on the DNR's PFAS list.

Changes from Previous Permit:

PFAS monitoring is now included.

Explanation of Limits and Monitoring Requirements

Monitoring requirements for the land treatment system are based on the presence of these contaminants in the groundwater extraction system. Monitoring prior to discharge to the seepage cell allows for the assessment of the effectiveness of the current seepage system in preventing further groundwater contamination. Limitations are based on groundwater quality standards found in ch. NR 140, Wis. Adm. Code.

Centralized Waste Treatment facilities are considered likely sources of PFAS contamination. The department recognizes that this particular permittee trucks their higher-strength waste streams offsite for disposal. However, this permit regulates discharges to a seepage cell, which is primarily comprised of contaminated groundwater. There is an open Remediation and Redevelopment investigation into this site for PFAS, with concentrations of PFAS in the extracted groundwater exceeding recommended Cycle 10 and Cycle 11 groundwater standards from the Wisconsin Department of Health Services. The department has determined that the presence of PFAS in the effluent warrants continued PFAS monitoring at regular intervals during the next permit term to determine the extent of the PFAS contamination onsite.

Additionally, the department is requiring monitoring for 33 PFAS compounds to aid in the source evaluation and reduction process. Monitoring for a combination of both short and long-chain PFAS compounds will allow the permittee to fully assess the extent and likely current and historic sources of PFAS onsite.

As of May 2023, this is the following list of PFAS required to be sampled for:

1. PFBA (Perfluorobutanoic acid)
2. PFPeA (Perfluoropentanoic acid)
3. PFHxA (Perfluorohexanoic acid)
4. PFHpA (Perfluoroheptanoic acid)
5. PFOA (Perfluorooctanoic acid)\
6. PFNA (Perfluorononanoic acid)
7. PFDA (Perfluorodecanoic acid)
8. PFUnA (Perfluoroundecanoic acid)
9. PFDaA (Perfluorododecanoic acid)
10. PFTrDA aka PFTriDA (Perfluorotridecanoic acid)
11. PFTA aka PFTeDA (Perfluorotetradecanoic acid)
12. PFBS (Perfluorobutanesulfonic acid)
13. PFPeS (Perfluoropentanesulfonic acid)
14. PFHxS (Perfluorohexanesulfonic acid)
15. PFHpS (Perfluoroheptanesulfonic acid)
16. PFOS (Perfluorooctanesulfonic acid)
17. PFNS (Perfluorononanesulfonic acid)
18. PFDS (Perfluorodecanesulfonic acid)
19. PFDoS (Perfluorododecanesulfonic acid)
20. 4:2 FTS (4:2 fluorotelomersulfonic acid)
21. 6:2 FTS (6:2 fluorotelomersulfonic acid)
22. 8:2 FTS (8:2 fluorotelomersulfonic acid)

23. PFOSA (Perfluorooctanesulfonamide)
24. NMeFOSA (N-Methylperfluorooctanesulfonamide)
25. NEtFOSA (N-Ethylperfluorooctanesulfonamide)
26. NMeFOSAA (N-Methylperfluorooctanesulfonamidoacetic acid)
27. NEtFOSAA (N-Ethylperfluorooctanesulfonamidoacetic acid)
28. NMeFOSE (N-Methylperfluorooctanesulfonamidoethanol)
29. NEtFOSE (N-Ethylperfluorooctanesulfonamidoethanol)
30. HFPO-DA (Hexafluoropropylene oxide dimer acid)
31. DONA (4,8-dioxa-3H-perfluorononanoic acid)
32. 9Cl-PF3ONS aka F53 Major (9-chlorohexadecafluoro-3-oxanonane-1-sulfonic acid)
33. 11Cl-PF3OUdS aka F53 Minor (11-chloroeicosafluoro-3-oxaundecane-1-sulfonic acid)

2 Groundwater Requirements

2.1 Monitoring and Limitations

Sample Point Designation For Groundwater Monitoring Systems			
System	Sample Pt Number	Well Name	Comments
Seepage Area	801	W-1 (801)	
	802	W-1A (802)	
	803	W-18 (803)	
	804	W-18A (804)	
	809	W-29 (809)	
	810	W-19R (810)	
	811	MW-116 (811)	
	813	MW-26 (813)	

2.1.1 Groundwater Monitoring System for Seepage Area

Location of Monitoring system: Vicinity of WRR's infiltration area for treated effluent

Wells to be Monitored: W-1 (801), W-1A (802), W-18 (803), W-18A (804), W-29 (809), W-19R (810), MW-116 (811), MW-26 (813)

Point of Standards Application Well(s): MW-116 (811), W-19R (810), W-29 (809), W-18A (804), W-18 (803)

Parameter	Units	Preventative Action Limit	Enforcement Standard	Frequency
Depth To Groundwater	feet	*****	N/A	Annual
Groundwater Elevation	feet MSL	*****	N/A	Annual
1,1-Dichloro- ethane	ug/L	85	850	Annual
1,2-Dichloro- ethane	ug/L	0.5	5.0	Annual
1,1-Dichloro- ethylene	ug/L	0.7	7.0	Annual
1,2-cis Dichloroethene	ug/L	7.0	70	Annual
1,2-trans Dichloroethylene	ug/L	20	100	Annual
1,2-Dichloro- benzene	ug/L	60	600	Annual
1,3-Dichloro- benzene	ug/L	120	600	Annual
1,4-Dichloro- benzene	ug/L	15	75	Annual
Carbon tetrachloride	ug/L	0.5	5.0	Annual
Chloroethane	ug/L	80	400	Annual
Chloroform	ug/L	0.6	6.0	Annual
Chloromethane	ug/L	3.0	30	Annual
Methylene chloride	ug/L	0.5	5.0	Annual
1,1,1,2-Tetrachloro- ethane	ug/L	7.0	70	Annual
1,1,2,2-Tetrachloro- ethane	ug/L	0.02	0.2	Annual
Tetrachloroethylene	ug/L	0.5	5.0	Annual
1,1,1-Trichloro- ethane	ug/L	40	200	Annual
1,1,2-Trichloro- ethane	ug/L	0.5	5.0	Annual
Trichloro- ethylene	ug/L	0.5	5.0	Annual
1,2,4-Trichloro- benzene	ug/L	14	70	Annual
Methyl ethyl ketone (MEK)	mg/L	0.8	4.0	Annual
Methyl isobutyl ketone (MIBK)	ug/L	50	500	Annual
Acetone	mg/L	1.8	9.0	Annual
Vinyl chloride	ug/L	0.02	0.2	Annual
Benzene	ug/L	0.5	5.0	Annual
Toluene	ug/L	160	800	Annual
Xylene	mg/L	0.4	2.0	Annual
Ethylbenzene	ug/L	140	700	Annual
Trimethylbenzenes	ug/L	96	480	Annual

Methyl tert-butyl ether (MTBE)	ug/L	12	60	Annual
PFAS	ng/L	*****	N/A	Annual

Changes from Previous Permit:

Annual PFAS monitoring has been added.

Explanation of Limits and Monitoring Requirements

See s. 1.2 for a list of the PFAS to be monitored. Annual monitoring is required to gather data on the extent of PFAS contamination onsite.

See Appendix B (Groundwater Quality memo) for an analysis of groundwater data reported to the department, along with a justification for the continuation of existing monitoring requirements. See Appendix A for a summary of the data reported during the previous permit term.

3 Schedules

3.1 Groundwater Data Evaluation

Required Action	Due Date
<p>Groundwater Data Evaluation: When quarterly monitoring of groundwater monitoring wells is required due to exceedance of 50% of the enforcement standard for Acetone, Methyl Ethyl Ketone, Methyl Isobutyl Ketone, at any of the downgradient wells [(MW-18 (803), MW-18A (804) & MW-29 (809)], the permittee shall do an evaluation of the likely cause of the exceedance. The evaluation shall include review of discharge monitoring report (DMR) data. The permittee shall submit a letter to the Department that identifies the cause(s) of the exceedance & what actions are being (or will be) taken to correct the problem & the dates that the corrective action(s) were (or will be) taken.</p> <p>If effluent sample results exceed the limits applicable at Land Treatment Outfall 002, it will be considered a limit violation & follow up will be through stepped enforcement. Responses could include notice of non-compliance (NON), notice of violation (NOV), referral to the Department of Justice or additional treatment depending on the frequency, severity & duration of the violation.</p>	

3.2 Monitoring Well Map

A management plan is required for the land disposal system.

Required Action	Due Date
<p>Monitoring Well Map: Submit a map showing the precise locations of all monitoring wells. All monitoring well locations shall be included on a plan map drawn to scale. The map shall indicate structure boundaries, property boundaries, any nearby surface waters and a north arrow. The plan shall show the wells in relation to each other, to property and structure boundaries, and to a common</p>	11/30/2023

reference point on a horizontal grid system. The origin of the grid system shall be located according to latitude and longitude or according to the state plane coordinate system. The exact vertical location of the top of the well casing shall be referenced to the nearest benchmark for the national geodetic survey datum to an accuracy of 0.01 feet. This plan map shall show the exact location of the installed well on a horizontal grid system which is accurate to within one foot. Direction of groundwater flow shall be indicated. In addition, an 8.5-inch by 11-inch site map drawn to scale according to the horizontal grid system shall be submitted showing the location of wells and structures on the site. The permittee shall accompany this map with the latitude and longitude coordinates of all monitoring wells.	
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Explanation of Schedules

The above 'Groundwater Data Evaluation' compliance schedule language is continued into this permit term. The language is to ensure that groundwater quality exceedances are properly addressed in accordance with the requirements of ch. NR 140, Wis. Adm. Code.

The 'Monitoring Well Map' schedule is included to ensure that the locations of all monitoring wells onsite are identified. This map is required in accordance with s. NR 141.065, Wis. Adm. Code.

Attachments:

Appendix A: Reported Outfall 002 Data 1/2018 – 12/2022

Appendix B: DNR Groundwater Evaluation

Proposed Expiration Date:

08/31/2028

Prepared By:

Nate Willis, P.E.

Wastewater Engineer

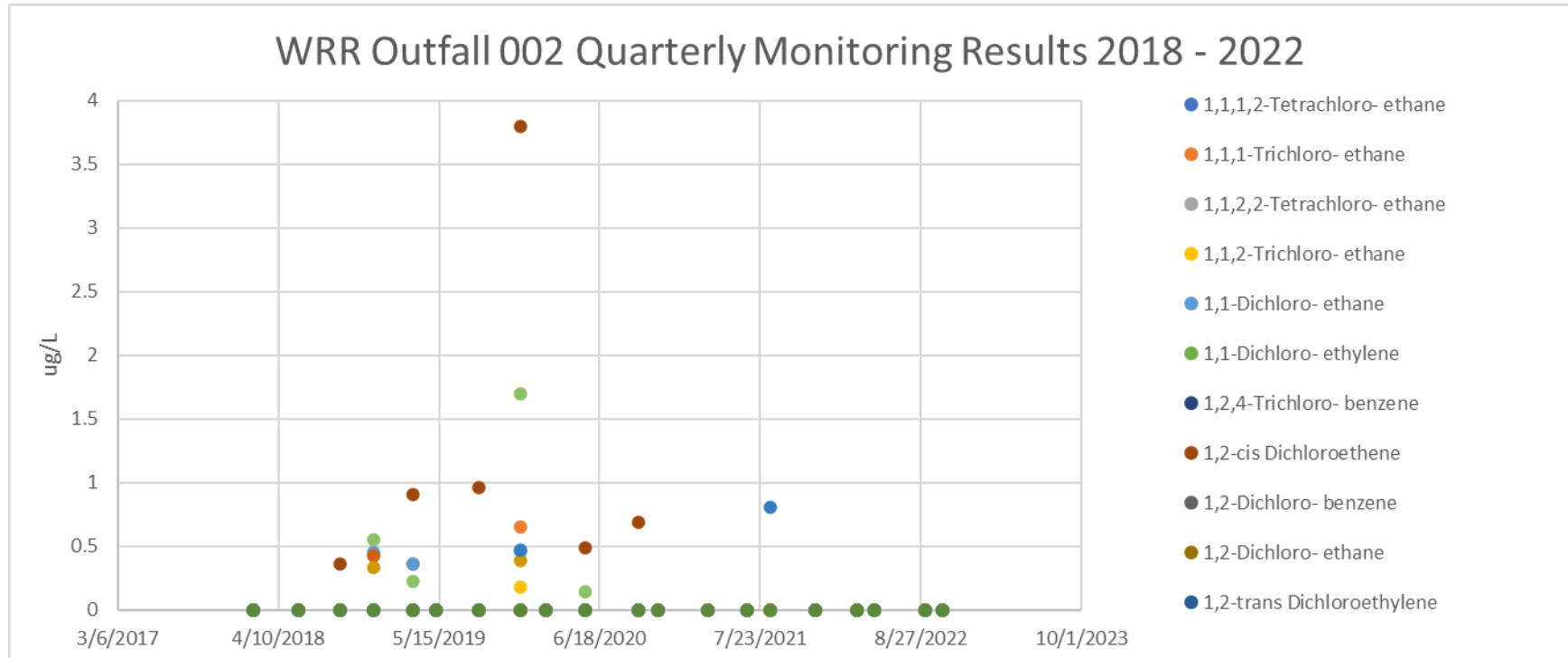
Bureau of Water Quality

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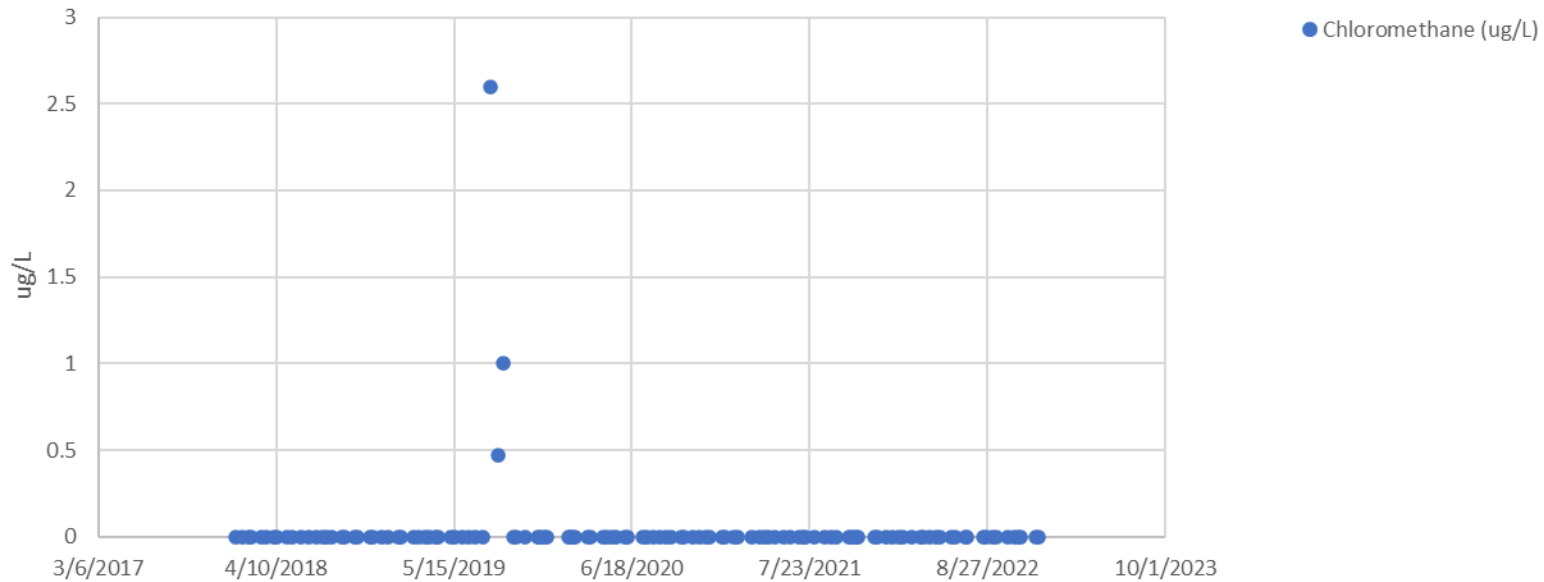
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APPENDIX A

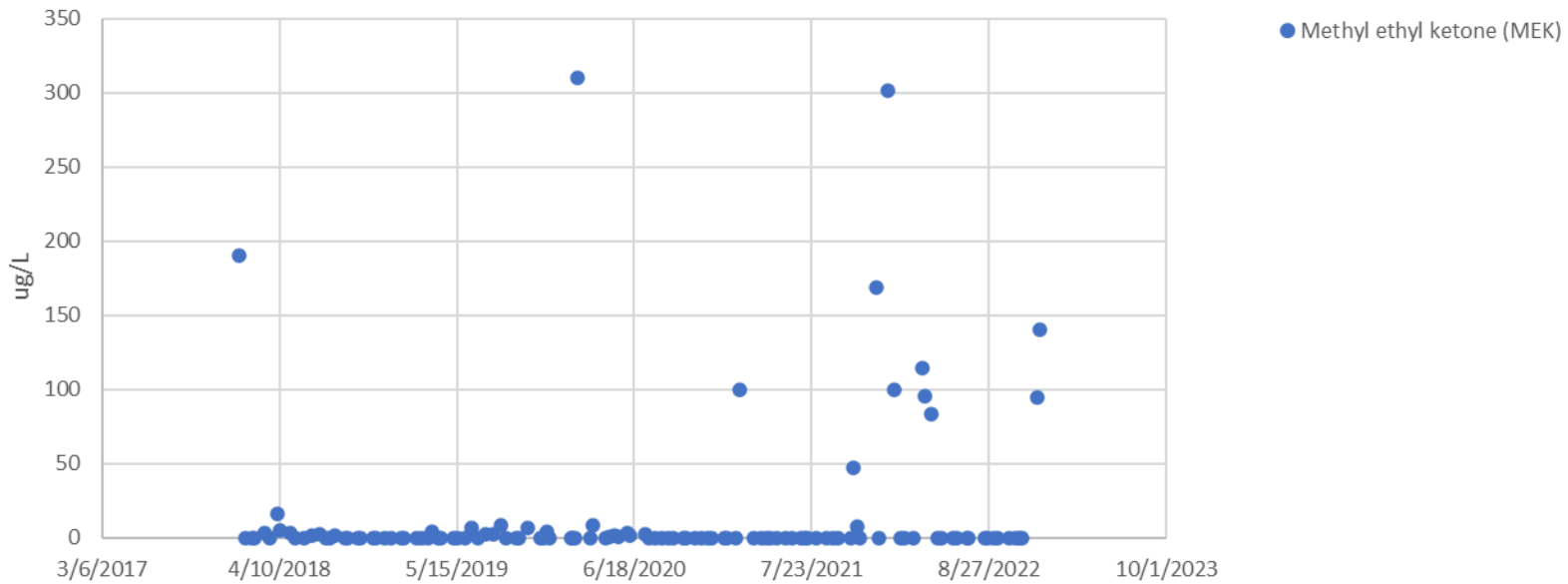
OUTFALL 002 REPORTED DATA 2018 – 2022



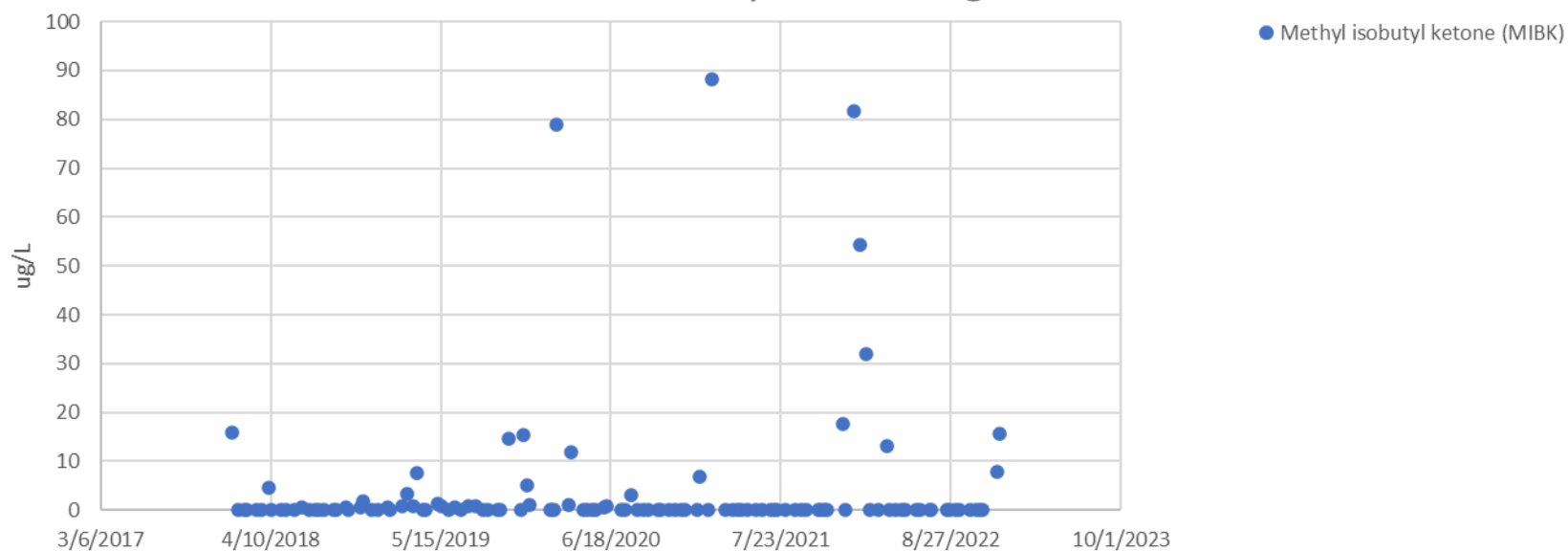
WRR Outfall 002 Quarterly Monitoring Results 2018 - 2022



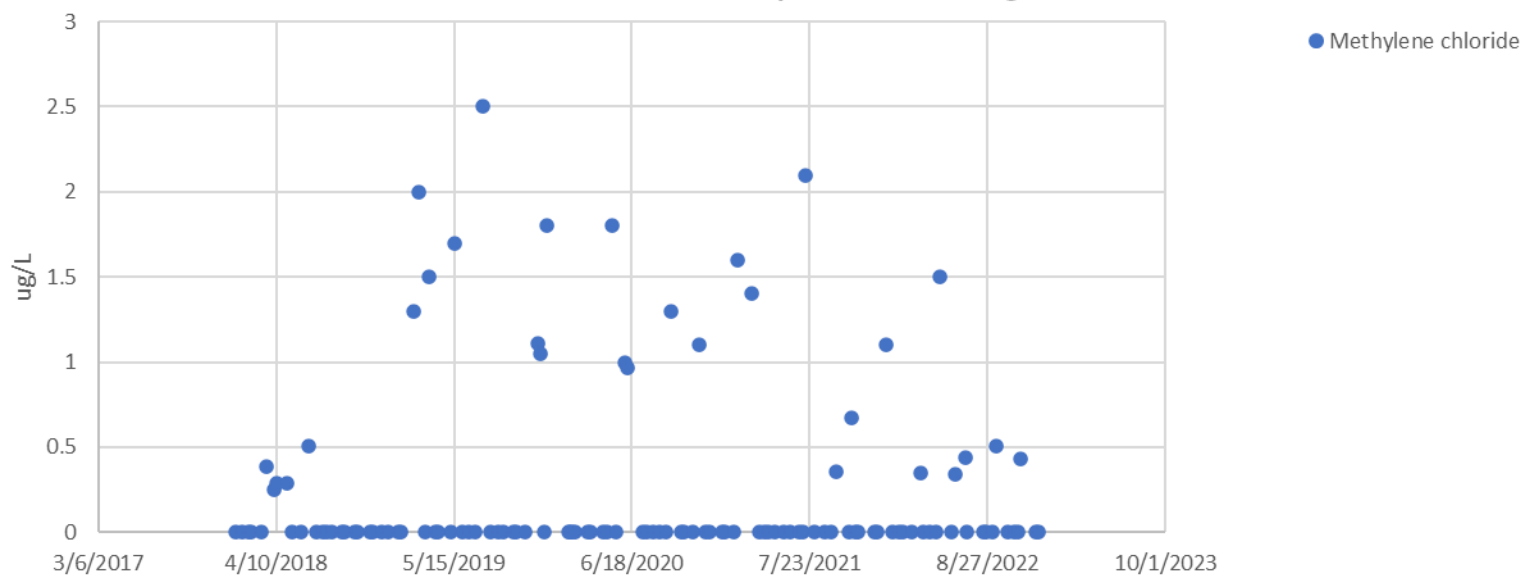
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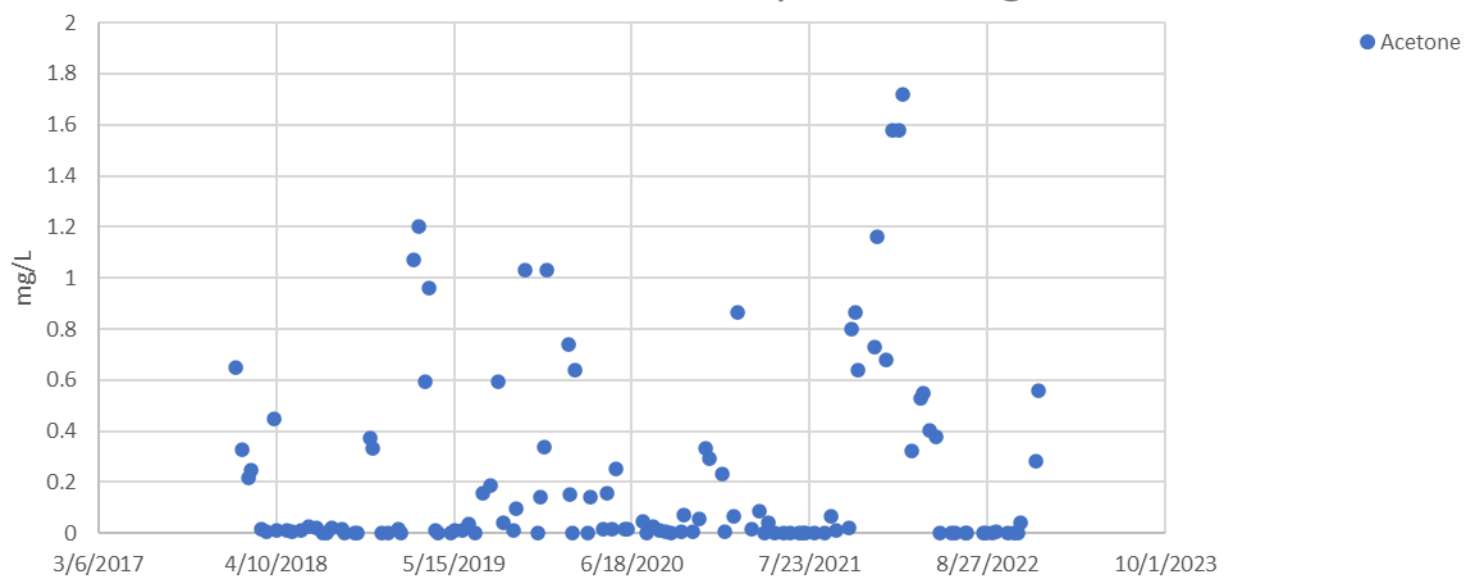
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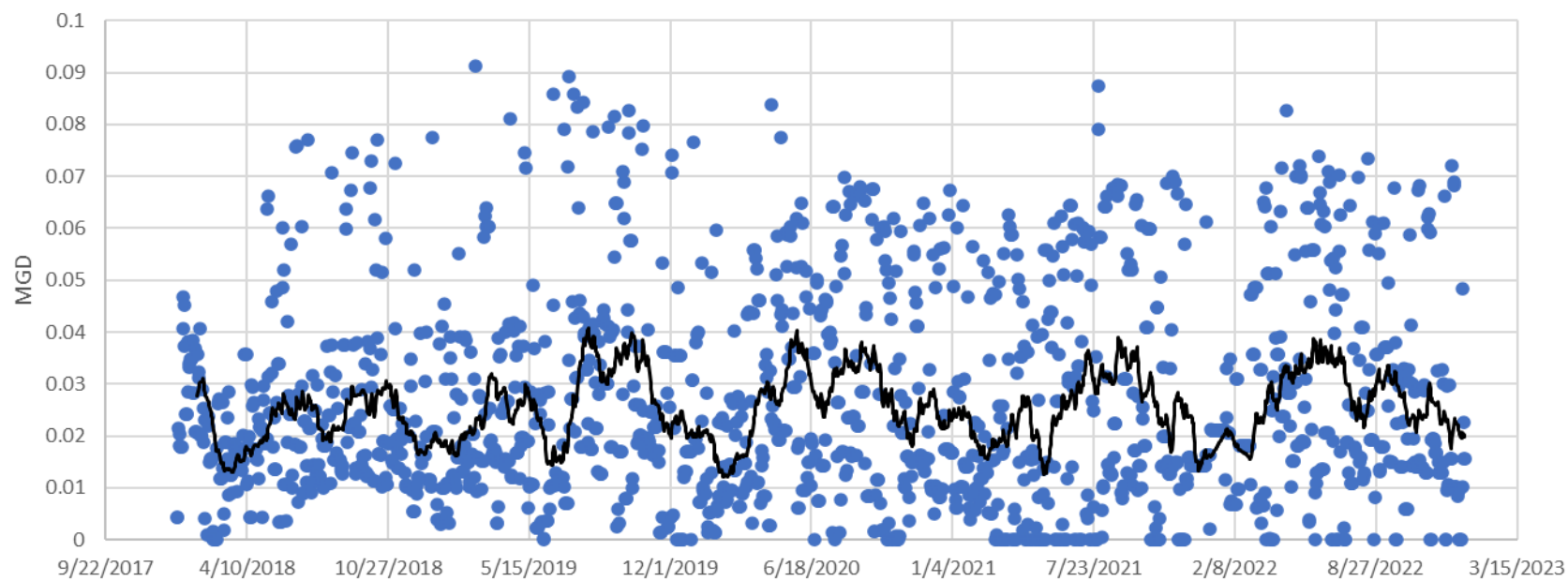
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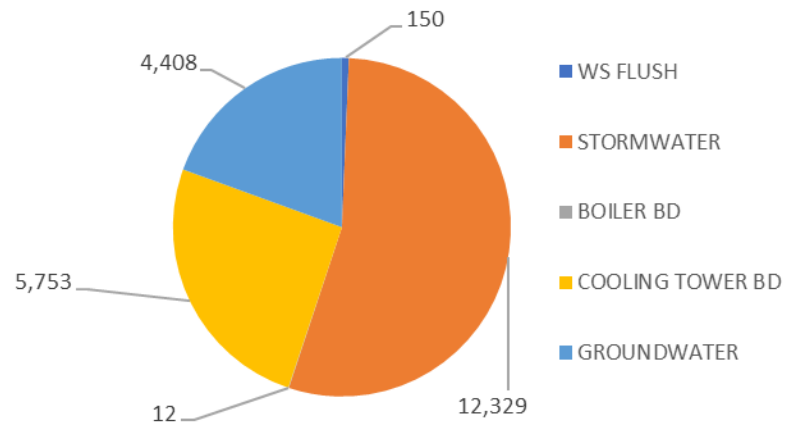
WRR Outfall 002 Quarterly Monitoring Results 2018 - 2022



WRR Outfall 002 Flow Rate 2018 - 2022



2022 Permit Application



2017 Fact Sheet

